

Claims

1. A method for controlling a processing of video data such that said video data may be transmitted over a connection in a communication network (I,II), said connection employing a plurality of protocol layers (L1, L2; AL, NL/TL, LL), said method including:

performing said controlling of the processing of video data at a first layer (L1; AL),

acquiring a value of one or more transmission condition parameters indicative of transmission conditions in the network (I, II), where said one or more transmission condition parameters are specific for a second layer (L2; NL/TL, LL) provided lower than said first layer (L1; AL),

deriving one or more values of one or more video control parameters usable at said first layer (L1; AL) from said value of said at least one transmission condition parameter, and

performing said controlling of the processing of video data in accordance with said derived one or more values.

2. The method of claim 1, wherein said connection comprises a predetermined link (100, 200, 300; 79; 2223) and said one or more transmission condition parameters relate to a condition of said predetermined link.

3. The method of claim 2, wherein said one or more values of said one or more transmission condition parameters are acquired at said second layer on a sending side of said predetermined link (100, 200, 300; 79; 2223).
4. The method of claim 2, wherein said predetermined link (100, 200, 300; 79; 2223) is a radio link (79; 2223).
5. The method of claim 1, wherein said first layer (L1; AL) is an application layer (AL) and said second layer (L2; NL/TL, LL) is a link layer (LL).
6. The method of claim 1, wherein said communication network (I, II) is a wireless communication network (I), and said method is applied to the processing of video data in one or more of a mobile station in said wireless communication network, a base station in said wireless communication network, an interworking function between said wireless communication network and a fixed network, a terminal device in said fixed network, and a proxy server (50) provided in said wireless communication network or said fixed network.
7. The method of claim 1, wherein said processing of video data comprises the coding or transcoding of said video data.
8. The method of claim 1, wherein said processing of video data comprises the forward error correction of said video data.
9. The method of claim 1, wherein said processing of video data comprises the packetization of said video data.

10. The method of claim 1, wherein said one or more transmission condition parameters are selected from a group consisting of the current transmission delay, the bandwidth allocated for a specific user, the current bit error rate, and the current frame erasure rate.
11. The method of claim 2, wherein said one or more transmission condition parameters are selected from a group consisting of the current carrier to interface ratio on the predetermined link and the current power-level on the predetermined link.
12. The method of claim 1, further comprising transmitting said video data in scalable form by having a base stratum and at least one enhancement stratum, and by deciding on the inclusion or exclusion of said enhancement stratum in the transmitted video data on the basis of the derived one or more values of said one or more video control parameters.
13. The method of claim 1, further comprising transmitting said video data in scalable form by having at least two independent bitstreams of video data, and by selecting one of said bitstreams as the transmitted video data on the basis of the derived one or more values of said one or more video control parameters.
14. A computer program product loadable into a memory of a digital computer device, including software code portions for performing the method of one of claims 1 when said computer program product is run on said computer device.

15. A storage medium for computer program products having the computer program product of claim 14 stored thereon.
16. A transmitting system (A, B) for transmitting video data over a connection in a communication network (I, II) that employs a plurality of protocol layers (L1, L2; AL, NL/TL, LL), comprising:

a processing element (1; 2) arranged to process video data to be transmitted at a first layer,

an acquisition element (7, 22; 9, 23) arranged to acquire a value of one or more transmission condition parameters indicative of a transmission condition associated with said connection, said one or more transmission condition parameters being specific for a second layer (L2; NL/TL, LL) lower than said first layer (L1; AL), and

an element for deriving one or more values of one or more video control parameters usable by said processing element (1; 2) at said first layer (L1; AL) from said value of said one or more transmission condition parameters,

where said processing element (1; 2) is arranged to control the processing of video data in accordance with said derived one or more values.

17. The transmitting system according to claim 16, wherein said acquisition element (7, 22; 9, 23) is a part of a control element provided for controlling the transmission of data over a predetermined link (100,

200, 300; 79; 2223) forming part of said connection, where said one or more transmission condition parameters are indicative of a transmission condition associated with said predetermined link (100, 200, 300, 79; 2223).

18. The transmitting system according to claim 16, wherein said predetermined link (100, 200, 300, 79; 2223) is a radio link (79; 2223).
19. The transmitting system of claim 18, wherein said acquisition element (7, 22; 9, 23) is arranged such that said one or more values of said one or more transmission condition parameters are acquired at said second layer (L2; LL) on a sending side of said radio link.
20. The transmitting system of one of claims 16 to 19, wherein said first layer (L1; AL) is an application layer (AL) and said second layer (L2; NL/TL, LL) is a link layer (LL).
21. The transmitting system claim 16, wherein said communication network (I, II) is a wireless network (I), and said processing element (1; 2) is provided in one or more of a mobile station in said wireless network (I), a base station (BSC) in said wireless network (I), an interworking function (IWF) between said wireless network (I) and a fixed network (II), a terminal device (B) in said fixed network (II), and a proxy server (50) provided in said wireless network (I) or said fixed network (II).
22. The transmitting system of claim 21, wherein said processing element, said acquisition element and said

element for deriving values of video control parameters are all provided in one unit (A, BSC).

23. The transmitting system of claim 21, wherein said acquisition element (7, 22; 9, 23) is provided in a different unit than said processing element (1; 2; 14; 15).
24. The transmitting system of claim 23, wherein said processing element (2; 15) is provided in one of a terminal device (B) of said fixed network (II) and a proxy server (50), and said acquiring element (9) is provided in a base station (BSC) of said wireless network (I).
25. The transmitting system of claim 16, wherein said processing element (1; 2) is arranged to perform coding or transcoding of said video data.
26. The transmitting system of claim 16, wherein said processing element (1; 2) is arranged to perform forward error correction of said video data.
27. The transmitting system of claim 16, wherein said processing element (1; 2) is arranged to perform packetization of said video data.
28. The transmitting system of claim 17, wherein said one or more transmission condition parameters are selected from a group consisting of the current transmission delay on the link, the bandwidth allocated for a specific user on the link, the current bit error rate on the link, and the current frame erasure rate on the link.

29. The transmitting system of claim 18, wherein said one or more transmission condition parameters are selected from a group consisting of the current carrier to interface ratio on the radio link and the current power-level on the radio link.
30. The transmitting system of claim 16, wherein said processing element is arranged to control the transmission of said video data in scalable form by having a base stratum and at least one enhancement stratum, and is arranged to decide on the inclusion or exclusion of said enhancement stratum in the transmitted video data on the basis of the derived one or more values of said one or more video control parameters.
31. The transmitting system of claim 16, wherein said processing element is arranged to control the transmission of said video data in scalable form by having at least two independent bitstreams of video data, and is arranged to select one of said bitstreams as the transmitted video data on the basis of the derived one or more values of said one or more video control parameters.
32. A transmitting unit for transmitting video data over a connection in a communication network that employs a plurality of protocol layers, comprising:
- a processing element arranged to process video data to be transmitted at a first layer,

an acquisition element arranged to acquire a value of one or more transmission condition parameters indicative of a transmission condition associated with said connection, said one or more transmission condition parameters being specific for a second layer lower than said first layer, and

an element for deriving one or more values of one or more video control parameters usable by said processing element at said first layer from said value of said one or more transmission condition parameters,

where said processing element is arranged to control the processing of video data in accordance with said derived one or more values.

33. The transmitting unit of claim 32, wherein said communication network is a wireless network, and said unit is one of a mobile station in said wireless network, a base station in said wireless network, an interworking function between said wireless network and a fixed network, a terminal device in said fixed network, and a proxy server provided in said wireless network or said fixed network.